

What is claimed is:

1. A coagulation spun structure comprising single-wall carbon nanotubes, the structure swelling by less than about 10% in diameter when immersed in water.
- 5 2. The structure of claim 1, wherein the structure comprises fiber, ribbon or yarn.
3. The structure of claim 2, wherein the fiber, ribbon, or yarn forms a winding on a mandrel.
- 10 4. The structure of claim 1, wherein the single-wall carbon nanotubes have an average diameter in the range of about 0.6 nm to about 0.9 nm
5. The structure of claim 1, wherein the structure further comprises an electromechanical actuator, a supercapacitor or a woven article.
- 15 6. The structure of claim 1, wherein the structure forms a main hydrogen storing element for a hydrogen storage device.
7. A fiber, ribbon or yarn comprising greater than about 90 weight percent carbon single-wall nanotubes, wherein average diameter of the single-wall carbon nanotubes is about in the range of about 0.6 nm to about 0.9 nm.
- 20 8. A fiber comprising single-wall carbon nanotubes, the fiber containing no binding agent or carbonaceous impurities.